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Documentaries: a Special Kind of Filming

# *American* **Cinematographer**

## *Symphony in Riff*

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Capt. Noel, 1922  
Cinematographer  
Of Mt. Everest

*Die Hard II* Crashes  
Summer Biggie List





# Conservation Problems Recorded Worldwide

by Gary Lopez

"How many passengers in your party?"

"Two."

"And how many pieces of luggage?"

"Eighteen."

The ticket agent stopped writing and looked up with a smile that could not mask her astonishment.

"Well, you boys should have an outfit for every occasion."

Airports might be the toughest locations for documentary film makers, especially a two-man crew. There's no way to avoid being conspicuous when you trudge into a terminal dragging what appears to be the contents of a two-bedroom house. Dividing the gear between eight or ten people would certainly make airport check-in easier, but a two-man crew is often the best way to film the projects that come my way.

Encyclopaedia Britannica Educational Corporation had hired me to make three short films for a series entitled, "Problems Of Conservation," intended for international distribution and to be translated into several languages. Because of this, it was decided that there would be no sync sound to complicate things. It was also felt that the films should have a global perspective. After all, many of the pollution issues that would be addressed, including the greenhouse effect and the destruction of the stratospheric ozone, are worldwide problems with worldwide consequences. Since there would not be an absolute necessity for location sound, and since filming would require a great deal of globe trotting, this was a good job for a two-man production crew. One crew member was LA-based director of photography Peter



*Whiteface Mountain Cloud Research Station in the Adirondacks.*

Bonilla, along with me as producer/director/focus puller/dolly grip/driver/baggage handler.

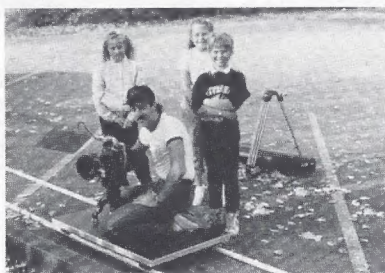
Problems facing small-crew documentary teams were part of my training from producer/cinematographer Bert Van Bork (American Cinematographer, June 1971 and August 1972). My job then was to write the shooting and final scripts, set

up the locations, and act as Van Bork's production assistant when we were on the road. This experience allowed me to develop story-structure skills that are founded in adaptability. Sometimes a location doesn't work (because of weather, illness, or not finding what we wanted), or a location offered more than we expected. I spent many hours in the back seat of a car rewriting





**Above:** Filming the cloud research station during a 'weather event.'  
**Below:** Peter Bonilla and Green Bay, Wisconsin dolly crew.



scripts to accommodate what we actually got on film as we drove to our next location. The key to this style of filmmaking is to realize that changes are going to happen and to plan a shooting script that can roll with the punches.

After writing the shooting script for "Problems Of Conservation," I got together with Peter Bonilla and San Francisco-based editor Charles Rotter to discuss the visual approach for each film. To avoid a journalistic look, we agreed to use a minimum of zooms and concentrate on well-composed static images, pans, and tilts. An abundance of static shots would also afford greater control of the pace and mood of the films when it was time to script and edit. Since the subject matter was rather somber, we laid out lighting strategies to

maintain a muted look. Finally, to keep things simple we decided to bring only two film stocks: Kodak 7248 for daylight exteriors, and 7292 for interiors and night exteriors.

Film always attains the best image quality, but I enjoy editing in video. The planned shooting ratio for "Problems Of Conservation" was 8:1 (although we ended up closer to 12:1). With ratios in that neighborhood, I find that it is more cost effective to simultaneously transfer the negative to both the offline format (I use S-VHS for its convenience and low cost) and the online format (Beta-SP for this job). Using EditLister software has increased the speed of our online sessions from about 12 events per hour to as many as 70 events per hour (thanks in great part to Rotter's squeaky clean edit lists). Editing and conforming on tape not only saves money, it also gives two shots at color correction: during transfer and during online.

Although all of our locations were preplanned by telephone, we never knew exactly what we'd find until we arrived. I'd spend the first hour or two at each new location piecing the

story together and roughing out a mental storyboard. Peter would spend his time more practically, looking for electrical outlets and planning lighting setups. We carried a small lighting kit: four 600W Omnilights, two 1000W Totalights with umbrellas, and a sungun. Whenever possible, we used available light sources, but when it just wouldn't work, out came the gaffer's tape and we'd go on a wild window masking session. Frequently we ran into existing fluorescent lighting that was almost acceptable, but needed help. In these situations, we used portable fluorescent sources (generally constructed on the spot) and a handheld FlexFill. To gain an extra T stop, we never filtered the lens, preferring to color correct during video transfer or during online.

Since we traveled nearly 20,000 miles in about four weeks to film "Problems Of Conservation" (throughout the United States, Eastern Canada, and Western Europe), we tried to keep our equipment compact and light. We carried an Arri SR, three magazines, six lenses, a Sachtler head with standard and baby legs, a high hat, several light meters, tool kit, lighting kit, sun gun and charger, and still gear.

We did, however, bring along one luxury: a portable dolly of our own construction. We call it "the skateboard dolly." It's a reinforced wooden platform with four pairs of skateboard wheels. The wheels are mounted on two aluminum V-rails so that each pair of wheels points at opposing 45 degree angles. The dolly track consists of five-foot sections of 1 1/2" PVC pipe which are fastened together by 6" pieces of 1" PVC that snugly fit inside the ends of the larger pipe. The lengths of pipe do not require cross members hold them apart since the opposing wheels on the platform grip the pipes and prevent them from moving laterally. As strange as this contraption must sound, it works like a charm and it's easy to transport.



Doing dolly work was particularly difficult. Sometimes we simply did not have enough hands. The solution in these situations was to press into service whatever unfortunate soul might be nearby. On one occasion we were trying to do a dolly sequence at nearly ground-level through a flock of wild geese in a city park. Each time we were ready to begin filming, the geese wandered out of the frame. Three young kids watched us struggle. There was no way that we could get the shot by ourselves, so I hired them to help. Peter operated the camera on a high hat, I pushed the dolly, Jason, age 11, kept the geese flocked nearby with a bag of popping corn, while Melissa, age 10, and her cousin Trish, age 9, swept the leaves off the dolly tracks. The kids' fee for their services was chocolate sundaes with sprinkles and the footage was wonderful.

Coping with the challenges offered by rapid-fire locations was certainly a major part of filming "Problems Of Conservation". One of our first occurred in Green Bay, Wisconsin. We had scheduled a Bell Jet Ranger and a Tyler mount to film aerial close-ups of a 400-foot power plant smoke stack. The footage was intended for a long title sequence requiring it to look very smooth and clean. When the helicopter cancelled out at the last minute, our only choice was to use a small, single engine plane at the local airport. The pilot hadn't done any aerial photography, but she was game. After a couple of rolls of gaffer's tape and a few bungee cords, we had her plane modified for our purposes.

To make the footage as smooth as possible we decided to overcrank the camera and adjust the speed during online editing. Also to help smooth things, we shot wider than we had planned, which meant getting a lot closer to a smokestack than we wanted.

Peter tied himself and his Arri into the passenger seat, while I crammed myself into the

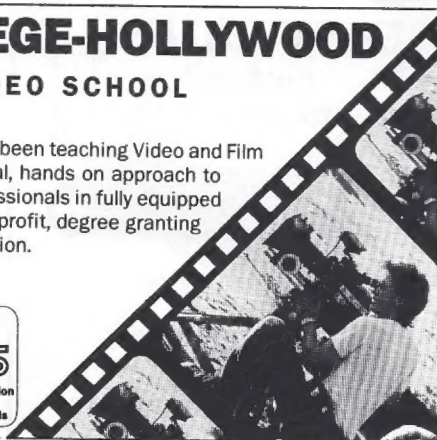
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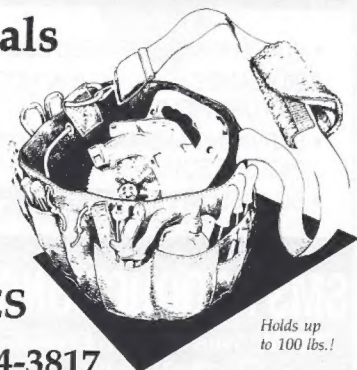
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storage space just behind him. I could just reach the aperture ring on the lens and my job was to smoothly roll the T-stops according to our predetermined 4-point compass readings as we circled the smoke stack.

Our pilot was a quick study. Once airborne, we explained the importance of a smooth ride and how we wanted to emulate the floating movement of a helicopter. Since we would be passing very close to the stack, keeping our airspeed as slow as possible would be a must. Our pilot nodded that she understood and went on to explain some aeronautical details that were lost in the engine noise. Being polite, I nodded "yes" as she talked, not having any idea what I was agreeing to.

As she banked the plane over for our first pass, the engine noise dropped off very noticeably and I felt the plane begin to fall sideways. Our pilot had apparently been explaining that the only way to go slowly enough was to glide. Peter, enraptured with the image in his eyepiece, was oblivious to our situation and repeated over and over again, "This is great, this is great!" I tried to ignore the fact that we were falling into the open smoke stack of a power plant by concentrating on rolling the aperture ring. This "gliding" trick really worked, because the footage we got would not have been improved by a helicopter mount.

Perhaps our most heroic solution to a location "challenge" occurred at a cloud research station on the summit of Whiteface Mountain, one of the highest peaks in the Adirondacks of New York State. The station is a shingle-sided tower on the mountaintop that is regularly swallowed up by the clouds of passing storms. After two days of filming in sometimes subzero temperatures and 40-mile-per-hour winds, we were down to our final sequence, a trip through the 300-foot tunnel carved through the rock of the mountain

that leads up to the station.

Our plan was to do a hand-held sequence traveling down the tunnel, tracking the station's resident scientist. To give the shot dramatic perspective, 60 watt incandescent bulbs were mounted along the length of the tunnel. To light the scientist, we purchased a gas lantern for him to carry. At about 6 pm on our final shooting day we were ready to go, except for one problem . . . the lantern would not light!

The tunnel sequence was essential to the continuity of what we had filmed during the previous two days, and it was too late to replace the faulty lantern. Desperate times call for desperate measures. We decided to "jerry rig" a 50W AC worklight into the frame of the gas lantern. As the scientist held the gas-lantern handle, we strung the cord from the AC light down his coat sleeve into his trousers. In the vicinity of his pocket, we connected a Mini-Cool Photo Dimmer, then snaked the cord down his pant leg and taped the plug to his shoe. We played out 100 feet of stingers down the wet tunnel and plugged into the scientist's shoe. Peter directed light readings, as the scientist gingerly adjusted the dimmer.

Now came the tricky part. Peter hand-held his Arri with a 12mm superspeed and shuffled backward down the tunnel while the scientist, lantern in hand, walked toward him. "Crab-walking" behind Peter, I guided him with one hand, while picking up and coiling the slack cable with the other. After about 75 feet, the scientist stopped and raised his free hand to the lantern as if to turn it off. At the instant he twisted his wrist, I yanked the cable plug from his foot and the light went out. As he sat on the wet tunnel floor and pulled the cable out of his trousers, the scientist expressed skepticism that this was the way movies were really made. I assured him they were. ▲